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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,069	11/25/2003	Giuseppe Esposito Corcione	856063.756	4160
38106	7590	03/21/2005		
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 6300 SEATTLE, WA 98104-7092			EXAMINER LO, WEILUN	
			ART UNIT 3747	PAPER NUMBER
DATE MAILED: 03/21/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/722,069	Applicant(s) CORCIONE ET AL.	
	Examiner Weilun Lo	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/26/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because: 1) Figure 4A is unclear and 2) in Figure 4B "4.3" (next to 12.1) should perhaps be -- 4.1 -- (see p. 9, l. 6). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "11" in Fig. 4A. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the

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description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 13, 18, and 19 are objected to because of the following informalities:
 - Claim 13, line 4, "an of" should perhaps be deleted; and
 - Claims 18 and 19, line 1, respectively, "the fluid dynamic model" lacks proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Jens et al. (FR 2,808,051). Jens et al. show all the claimed elements.

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6. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiyama et al. (EP 1,002,452, note application publication date of 7/26/2000).

Sugiyama et al. show all the claimed elements. Note particularly paragraphs 13-15, 46-50, and Fig. 5.

7. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Przymusinski et al. (US 6,311,669). Przymusinski et al. show all the claimed elements.

8. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano (US 6,085,727). Nakano shows all the claimed elements.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 2-8 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Jens et al. (FR 2,808,051), Sugiyama et al. (EP 1,002,452), Przymusinski et al. (US 6,311,669), or Nakano (US 6,085,727) in view Yang et al. ("Dynamic Modeling and Analysis of Automotive Multi-Port Electronic Fuel Delivery System"). Each one of Jens et al., Sugiyama et al., Przymusinski et al. and Nakano show a common rail fuel injection system with a pressure regulating system including a virtual pressure sensor utilizing a fluid-dynamic model of the accumulator/rail to estimate and obtain fluid pressure values used by the electronic control unit for driving the fuel injectors substantially as claimed. Yang et al. are relied upon to teach a method and system of dynamic modeling an electronic fuel injection system including providing models of sections of the accumulator/rail corresponding to the injectors. It would have been obvious at the time of the invention for one of ordinary skill in the art to have used the dynamic modeling system as taught by Yang et al. in any one of the systems of Jens et al., Sugiyama et al., Przymusinski et al. and Nakano in order to more precisely estimate the actual fluid pressure at each of the injectors used to calculate and control the required amount of fuel to be injected for desired engine output and efficiency. Regarding connections of the subsystems in relation to an electronic control unit (ECU) and its relations to a bus, demultiplexer, and multiplexer, such are typical and well known to one of ordinary skill in the art that an ECU uses such connections of inputs/outputs to control its subsystems.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weilun Lo whose telephone number is (571) 272-4847. The examiner can normally be reached on 8:30AM TO 7:00PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Weilun Lo
Primary Examiner
Art Unit 3747